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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/569,968	04/18/2007	Mustafa Muammer Demir	U 016143-2	3382
140	7590	10/12/2010		
LADAS & PARRY LLP 26 WEST 61ST STREET NEW YORK, NY 10023			EXAMINER LEONG, NATHAN T	
			ART UNIT 1715	PAPER NUMBER
			NOTIFICATION DATE 10/12/2010	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

nyuspatactions@ladas.com

### Office Action Summary

**Application No.**

10/569,968

**Applicant(s)**

DEMIR ET AL.

**Examiner**

NATHAN T. LEONG

**Art Unit**

1715

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 August 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) 7-10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SI/200)
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date 2/27/2006

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election of group I, claims 1-6 in the response filed 8/9/2010 is acknowledged. Applicant has traversed the restriction requirement in responses filed 7/6/2010 and 8/9/2010 (see pages 1-3). However, Applicant's arguments are not convincing. The shared technical feature between the three groups, as previously stated, is a metal coated polymer nano-fibre, and since the prior art Drew et al teaches this technical feature, the three inventions lack a special technical feature and therefore lack unity of invention and the restriction is considered proper (see MPEP 1893.03(d)). The restriction is therefore made FINAL and claims 7-10 are withdrawn from examination.

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. There is no previous step prior to step (b) of providing epoxy rings on the surface of the polymer nano-fiber, therefore "the epoxy ring" lacks proper antecedent basis. Additionally, claim 1 contains the step of "opening the epoxy rings" of the structure in steps b) and d). However, this is confusing since there is no claimed step in which the epoxy rings are "unopened/closed" (the epoxy

rings, having been opened in step b)), would already be opened in step d)). For examination purposes, it will be interpreted that the epoxy rings be opened in either of steps b) or d). Furthermore, step b) of claim 1 mentions "the epoxy ring", whereas step d) of claim 1 mentions "the epoxy rings"; this is confusing since it is unclear whether there is a single epoxy ring, or multiple epoxy rings.

Claim 1 also contains the limitation "the electrospun mat"; there is no previous step requiring the formation of a mat and therefore, the limitation "the electrospun mat" lacks proper antecedent basis. Claims 2-6 are likewise rejected as being dependent on claim 1.

Claim 2 is rejected because the Markush language is improper; the language of the claim should not be open (i.e. "group comprising" in line 2 should be changed to "group consisting of". Claim 6 is rejected because while it appears to claim a Markush group, it is not written properly, since the claim currently requires all the listed metal in their respective solvents. For examination purposes, it will be interpreted as a Markush group where any of the listed transition metal salts in their respective solvents can be used. Claim 6 also contains "Nicol<sub>2</sub>"; however, upon further search, it is unclear what "Nicol<sub>2</sub>" represents. For examination purposes, it will be interpreted to be NiCl<sub>2</sub>.

### ***Allowable Subject Matter***

3. Claims 1-6 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

4. The following is a statement of reasons for the indication of allowable subject matter: Examiner considers prior art Hicke et al US 6159370, Lin et al US 5681617, Chen et al US 6346136, and Drew et al "Metal Oxide-Coated Polymer Nanofibers" (NPL reference in IDS filed 2/27/2006). Hicke teaches a method of using a PAN-polymer fiber for use in membranes and functionalizing the membranes, and finally with water (see Example 1), but does not teach reducing the epoxy groups, or metal-coating the nanofibers. Lin teaches a method of metal coating ceramic fibers but does not teach metal coating a polymer nano-fiber by first reducing the epoxy groups, and does not teach treating with water in a final step. Chen teaches the process for forming nanoparticles and fibers in a method to make metal based nanofibers using carbon nanotubes as a template. However, Chen does not teach the process of having a polymer-nanofiber via electrospinning, reducing the epoxy groups, and coating the polymer-nanofiber with a metal. Lastly, Drew teaches a polymer-nanofiber and treating it with a metal-oxide salt solution to metal coat the nano-fiber, but does not teach first using a reducing agent to open the epoxy groups, and does not teach a final step of treating with water. None of the above listed references teaches the claim as a whole and additionally, there would be no obvious motivation to combine any of the above references; therefore, the instant claims are allowable over the prior art.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NATHAN T. LEONG whose telephone number is (571)270-5352. The examiner can normally be reached on Monday to Friday, 9:00am to 6:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on (571)272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/NATHAN T LEONG/  
Examiner, Art Unit 1715

/Timothy H Meeks/  
Supervisory Patent Examiner, Art Unit 1715